EA Engineering, Science, and Technology

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10 September 1996

Mr. Dan Kopcow
Foster-Wheeler Environmental Corporation
2300 Lincoln Highway East
One Oxford Valley, Suite 200
Langhorne, Pennsylvania 19047-1829

Re: Shop Drawing Review
NAWC Trenton, New Jersey

Dear Mr. Kopcow:

Based on a review of the shop drawings and component specifications provided by BISCO Environmental for the Low-Profile Air Stripper and Catalytic Oxidizer, EA Engineering recommends that the units be approved with comments noted as attached. While EA Engineering has requested that additional information be provided on several ancillary components, this should not affect the schedule for construction of these units.

Should FWENC or its designated subcontractor have a concern in reference to the attached comments, or if EA Engineering has misunderstood the intent of the subcontractor's drawings, confirmation of the change proposed by EA Engineering should be made before proceeding with construction. In addition, shop drawings should be resubmitted with the modifications included for record purposes.

If you have any questions or concerns related to these comments, please contact Mr. Jerry Jurick (Design Manager) from EA Engineering's Loveton, Maryland office at (410) 771-4950 or myself at (908) 665-2440.

Sincerely,

Michelle Y. Ronco

Michelle Y. Ronco
Project Engineer

MYR
cc: E. Boyle, Northern Division
P. Briegel, Northern Division
L. Frey, EA
J. Jurick, EA

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APPROVED	[ ]
APPROVED AS NOTED	[X]
REVISE AND RESUBMIT	[ ]
NOT APPROVED	[ ]

ENGINEER'S review and approval of this submittal are expressly limited as provided in the Contract Documents and are only to determine compliance with information given in Contract Documents and conformance with design concept of completed Project as a functioning whole. CONTRACTOR is, and ENGINEER is NOT, responsible for all matters relating to fabrication, shipping, handling, storage, assembly, installation and construction, for all safety aspects of performing the Work and for coordinating the Work.

9/10/96
Date

Engineer

9/10/96
Date

Project Manager

ENGINEER'S NOTES:

Reference: Low Profile Air Stripper, Tag Number T-401
BISCO Environmental, Subcontract No. 1284-09-5006
Specification Section 11301

Notes:

1. Initial comments were provided in 23 August 1996 and 29 August 1996 letters to FWENC.

2. Structural calculations/details were not provided as specified in Part 2.2, 2.3, 2.5, and 2.17. Please submit.

3. A clear well at the bottom of the unit and a sump inspection port should be provided as specified in Part 2.6 to allow the operator some method of easily determining when the sump should be cleaned.

4. A drain/sample port with manually operated valve should be provided at the bottom of the sump to completely drain the sump as specified in Part 2.6.

5. Details on demister performance were not provided to determine whether the demister being supplied with the unit is capable of removing 99% of droplets 10 microns or larger as specified in Part 2.7. Please submit demister data.

6. A differential pressure gauge instrument with a range of 0-60 in. of water should be provided with the unit as specified in Part 2.9. The instrument should be connected with rigid tubing and should be mounted adjacent to the control panel for accessibility.

7. Electrical equipment should conform to the requirements of the current version of the National Electric Code and motors should conform to NEMA MG-1 as specified in Part 2.10.

ENGINEER'S NOTES (CONTINUED):

8. The drawing titled "STAT 180 Air Stripper Structural Drawing" indicates that the discharge pump (P-401) is a 1½ HP Grundfos Model #EP125 1520. Submittal data for this pump indicates that this model is available with either a 1½ HP ODP motor or a 2 HP TEFC motor. A 2 HP TEFC motor should be provided with this pump as specified in Part 2.12.

9. A 7.5 HP blower should be provided with the unit, as specified in Part 2.13. Based on the fan curves provided, a 7.5 HP blower will achieve the required cfm and static pressure. Verbal confirmation has been made with a Carbonair representative (Mr. Chris Riddle), who stated that the unit is capable of operating properly with the 7.5 HP blower. It may be necessary to clean the trays more frequently to reduce wear on the blower. The power and control panel provided with the unit should be modified to reflect this change in motor HP.

   The blower shall be mounted on spring type vibration isolators as specified in Part 2.13. It was noted in a previous letter (25 July 1996) that the blower would not meet Type B non-sparking standards as specified, but was acceptable since it is of non-sparking internal construction.

10. Access ports for the sump and each tray should be provided as specified in Part 2.14.

11. Please submit details on the hydrostatic test procedure to be used by the manufacturer under Part 3.2.

APPROVED	[ ]
APPROVED AS NOTED	[X]
REVISE AND RESUBMIT	[ ]
NOT APPROVED	[ ]

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9/10/96 — Date

Engineer

9/10/96 — Date

Project Manager

ENGINEER'S NOTES:

Reference: Catalytic Oxidizer, Tag Number C-401
BISCO Environmental, Subcontract No. 1284-09-5006
Specification Section 11500

Notes:

1. Initial comments were provided in 23 August 1996 letter to FWENC.

2. The following items should be submitted to provide the CONTRACTOR with sufficient information to properly construct/install the unit and required connections:

   a. Details on the exhaust stack and support (guy wires) under Part 2.8.1.7. Details on the stack material and joint materials, support cable type, and cable anchoring method should be specified. Structural calculations for the design of the stack should also be provided. A threaded opening should be provided on the stack outlet to allow connection of sample port and piping.

   b. Details on the physical locations for connecting the electrical cable to the unit and for connecting the instrumentation cable from the unit to allow coordination with structural activities.

   c. Structural load calculations and details on anchoring the unit to the concrete.

3. The following items should be submitted/addressed in reference to proper operation of the unit:

   a. A NEMA 12 panel with weatherproof enclosure is acceptable; details on the door (enclosure) should be provided.

   b. Electrical equipment should conform to the requirements of the current version of the National Electric Code and motors should conform to NEMA MG-1 as specified in Part 2.7.

c. Selected system fan model should be clearly specified. Fan has been specified to be of aluminum construction. This should be sufficient, provided it complies with the other requirements specified in Parts 2.8.1.10 and 2.8.1.11. The fan should be capable of 650 cfm air flow to allow proper operation in conjunction with the selected air stripper unit.

d. Details on the heat exchanger under Part 2.8.1.6.

e. Pressure test connections as specified in Part 2.8.1.12.

f. Details on the maintenance doors for the unit. Doors should be gasketed; with single, centered, door handle-type latch and 3-point latch assembly preferred.

g. Information/message to be displayed on two-line message display.

4. The following items should be submitted/addressed prior to startup in reference to additional details on the unit/unit operation:

a. A performance certificate as specified in Part 2.1.1.

b. Nameplates for each major component of equipment as specified in Part 2.1.2.

c. Recommended maintenance equipment for proper operation of the system under Part 2.8.2.

d. Services of a factory installation specialist as specified in Part 3.1.

e. Proposed system performance test procedures as specified in Part 3.3.1.

f. Services of a manufacturer's representative as specified in Part 3.5.